Author Index Canadian Journal of Animal Science, Volume 89, 2009

Ali, M.A., 169 Aboismail, M., 152 Adeola, O., 159 Alain, K., 154 Aldai, N., 67, 146, 147, 315 Alexander, T.W., 150 Allard, G., 279 Alvarez-Rodriguez, J., 37 AlZahal, O., 134, 135, 138, 139, 140, 141 Ambrose, D.J., 163 Ametaj, B.N., 135, 142 Aminov, R., 149 Anderson, D.M., 138, 173, 179 Anderson, G.H., 161 Andraszek, K., 449 Araujo, F.R.C., 533 Archbold, T., 167 Archile, A., 147 Auldisst, M.J., 241 Avezard, C., 229 Ayoutani, A., 331

Baah, J., 263 Bach, S.J., 285 Bagg, R., 139 Bailey, M., 149 Baines, D., 162 Baker, C.D., 219 Bannink, A., 532 Baril, J., 139 Barioni, L.G., 533 Baron, V.S., 163 Barta, J.R., 169 Basarab, B.W., 128 Basarab, J., 178 Basarab, J.A., 156, 163 Bateman, K., 176 Beauchemin, K.A., 111, 159, 241, 409 Beaulieu, A.D., 53 Beaulieu, M., 1 Bédécarrats, G.Y., 154, 161 Bélanger, G., 279 Belliveau, R.M., 513 Beltranena, A., 489 Beltranena, E., 85 Bench, C., 178

Bench, C.J., 187 Benchaar, C., 97, 139 Bergen, R.D., 178 Bergeron, R., 151, 176 Bergsma, R., 125 Bernier, J.F., 531 Berthiaume, R., 133, 136, 279 Bertrand, A., 279 Bettger, W.J., 105 Bijma, P., 123, 125 Billen, M.J., 148 Bissonnette, N., 154 Bittman, S., 1, 21 Bizelis, J.A., 331 Block, H.C., 136, 143 Boermans, H., 154 Boiling, J.A., 149 Boksa, P., 131 Borgesa, G., 160 Bovenhuis, H., 123 Bovey, K., 176 Brito, A.F., 136 Brodeur, M., 139 Brown, F., 178 Brown, J.A., 156 Brown, K.R., 149 Bruce, H.L., 369 Bryan, M., 178 Brzozowski, W., 47 Budgell, K.L., 179 Buhr, M.M., 155 Burgos, S.A., 148 Burnside, E.B., 158 Burris, W.R., 149

Cai, H.Y., 149
Caldwell, T., 177
Caldwell, T.R., 155
Calvert, C.C., 537
Campbell, C.P., 133, 151
Cano, J.A., 273
Cant, J.P., 148, 153, 164, 309, 393
Cao, H., 148
Carrasco, S., 37
Carstens, G., 128
Cartwright, S., 158
Case, L., 132

Castonguay, Y., 279 Caulkett, N.A., 175 Cazemier, A., 171 Chabot, B., 178 Chae, B.J., 71 Chang, Z.-L., 457 Chaves, A.V., 97, 139 Chen, J., 539 Chen, X., 361 Cheung, Q.C.K., 149 Chibisa, G.E., 419 Chirino, M., 219 Chiu, D.K.Y., 164 Choi, J.Y., 71 Chouinard, P.Y., 139 Christensen, D.A., 144 Chun, L., 475 Chung, Y.-H., 409 Church, J., 177 Church, J.S., 335 Clarke, T., 241 Colazo, M.G., 163 Colley, A.J., 155 Colquhoun, J.K., 180 Colyn, J., 178 Colyn, J.J., 156 Connor, M.L., 538 Cook, N., 178 Cook, N.J., 177, 335 Corbett, R., 141 Core, S., 177 Correa, J., 176 Correa, J.A., 151 Côrtes, C., 139 Cowieson, A.J., 159 Crews, D., 146 Crews, D.H. Jr., 67, 152, 159 Croom, W.J., 141 Crowe, T., 151, 176 Currie, R.M., 156

da Silva, D.C., 139
Daetwyler, H.D., 124
Dag, B., 195
Danesh Mesgaran, M., 146, 165
de Lange, C., 156
de Lange, C.F.M., 147, 153, 160, 171, 172, 173, 174, 175

Castonguay, F.W., 229

de Ridder, K.A.G., 160 de Roos, A.P.W., 125 Deguzzman, R., 131 Dekkers, J.C.M., 124 DeLay, J., 176 Deligeorgis, S.G., 331 DesCôteaux, L., 139 DeVries, T., 165 Dewey, C., 156, 176 Dewhurst, R.J., 136 Dias, R.S., 138, 174, 539 Dick, P., 139 Dijkstra, J., 532, 535 Doelman, J., 148, 153, 309 Doncaster, K.L., 156, 163, 179 dos Santos, G. T., 139 Du. M., 169 Duan, J., 161 Dubuc, J., 139 Duffield, T., 139, 165 Dugan, M., 146 Dugan, M.E.R., 67, 147, 315 Duggan, M., 219 Duijvesteijn, N., 125 Dunn, S.M., 135, 142 Durunna, O.N., 180 DuTremblay, D., 139 Duvanov, S., 161

Eckard, R.J., 241 Edwards, G.R., 532 Ellis, J.L., 532, 539 Elsik, C., 164 Eskandarinasab, M., 301 Eugène, M., 139

Fadel, J.G., 537 Fan, M.Z., 154, 167, 169, 253, 493, 503, 536, 539 Farajollahi, H., 164, 166 Farid, A., 130 Farmer, C., 160 Fatehi, J., 130 Faucitano, L., 133, 151, 176 Feng, Y., 168 Fernendo, R.L., 124 Fikse, F., 129 Fisher, R., 138, 139 Flaten, D., 175 Forabosco, F., 129 Forsberg, C.W., 164 Fortin, J., 229 France, J., 138, 169, 170, 174, 531, 532, 535, 536, 539 Fraser, J., 431 Froelich, D., 178 Furedi, C.J., 425

Fynn, M.A., 538

Gadish, M., 164 Gagnon, N., 139 Gakhar, N., 141, 153, 180 Garber, A.F., 129 Gariépy, C., 229 Ghafouri-Kesbi, F., 301 Gianola, D., 123 Gibb, D., 145 Gibb, D.J., 137, 159, 415 Giger-Reverdin, S., 534 Gill, P., 149 Giris, G.N., 169 Girish, C.K., 170 Glover, K.E., 163 Glover, P., 132 Goddard, M.E., 124 Golovan, S.. 161 Golovan, S.P., 148, 155, 164 Gondro, C., 127 Gong, J., 168 Gonyou, H., 151, 176 Gonyou, H.W., 183, 187 Gonzalez, L., 178 Gonzalez, L.A., 175 Gooding, M., 177 Gozho, G.N., 144, 419 Gozzi, G., 159 Grainger, C., 241, 409 Greenwood, S.L., 135, 140, 153, 309 Greer, D., 145 Grużewska, A., 449 Guimaraes, J., 160 Guo, J., 71

Habier, D., 124 Hakimov, H.A., 164 Haley, D.M., 175 Han, C., 441 Han, J., 279 Han, Y., 168 Hao, X., 137 Harding, J.C.S., 219 Hassanabadi, A., 301 Hawke, A., 168 Hayes, B.J., 124 He, M.L., 172 Henderson, L., 151 Hendrick, S., 175 Heravi Moussavi, A., 146, 164, 165 Hernández, F., 273 Heydarpour, M., 133 Holligan, S., 154, 253, 493, 503 Holt-Klimek, L., 178 Holtshausen, L., 159 Hongbo, Y., 475 Hooda, S., 489 Hook, S. E., 141, 150, 535 Hosseini, F., 164

Htoo, J., 172 Htoo, J.K., 174 Hu, C.L., 160 Huang, Q., 533 Huertas, S., 178 Huot, P.S., 161

Ibanez-Escriche, N., 124 Iwaasa, A.D., 139, 409 Iyayi, E.A., 171

Jafarikia, M., 127, 130 Janzen, E., 175 Janzen, H.H., 135 Jen, K.Y., 157 Jia, W., 369 Jin, Y., 168 Jin, Z., 71 Johnson, G. V., 538 Johnson, H. A., 537 Johnson, R.P., 285 Jondreville, C., 531 Jones, R.O., 369 Joober, R., 131 Joy, M., 37 JunFang, 361

Kang, Z., 168 Karrow, N., 138, 139, 153, 154, 155, 157, 158, 166 Kaur, R., 163 Kazama, R., 139 Kebreab, E., 138, 170, 174, 531, 532, 533, 535, 539 Kelly, D., 149 Kelly, M., 126, 131, 132, 152, 158, 179 Kelly, N., 154, 503 Kelton, D., 151 Kemp, R.A., 158 Kennedy, A.D., 425 Keskin, I., 195 Khafipour, E., 134 Khakbazan, M., 136, 143 Kiaiie, E., 341, 353 Kim, B.W., 71 Kim, J., 164 Kinghorn, B.P., 125 Kiran, D., 159 Kistemaker, G., 128 Kluth, H., 171 Knol, E.F., 125 Ko, M., 253 Koenig, K.M., 111 Kolbehdari, D., 126 Kramer, J.K.G., 147, 315 Krause, D., 175

- Krause, D.O., **134**, **141**, **153**, **180**, 341, 353 Kreuzer, M., 383
- Lackeyram, D., 167, 536 Lafrenière, C., 133 Lawlis, P., 176 Lawrence, E., 85 Lawrence, L.M., 181 LeBlanc, S.J., 162 Leiber, F., 383 Leier, M., 173 Lepage, P., 178 Lescoat, P., 531 Leslie, K., 151, 165 Leslie, K.E., 162 Lessard, M., 154 Leterme, P., 481

Létourneau-Montminy, M.P., 531

- Lewczuk, A., 47 Lewin, H.A., 537 Lewis, M., 149 Lewis, N. 151, 176 Lewis, N.J., 538 Li, C., 67, 146 Li, J., 149
- Li, J.-Q., 457 Li, L., 441 Li, L.-F., 463 Li, S., 134, 141, 153, 180
- Li, X., 463 Liao, S.F., 149 Lindinger, M., 140
- Liu, A.Y.H., 127 Liu, J., 361 Liu, L., 169, 536 Liu, N., 144 Liu, T., 156, 178 Liu, X., 463
- Liu, Z., 361 Lopez, S., 174, 539 Lora, J., 145 Louie, M., 161 Lowerison, M.W., 158
- Lu, D.T., 131, 179 Lu, L., 441 Lu, X., 361
- Lu, Y., 168 Luimes, P.H., 160
- Ma, Y., 463 MacDonald, E.J., 170 MacEachern, S., 124 MacInnes, J.I., 149 MacInnis, C.E., 163 MacIsaac, J.L., 173 Macleod, I., 124

- Madrid, J., 273 Magnin, M., 531 Maignel, L., 127 Mainville, A.M., 105
- Mallard, B., 154 Mallard, B.A., 158 Mandell, I., 156, 176
- Mandell, I.B., 133, 147, 151, 152
- Marchand, S., 178 Martin, L., 154, 503 Martinez-Teruel, A., 273 Marx, T., 145 Mason, G., 177
- Mason, G.J., 182 Mathur, P.K., 127
- Matthews, J.C., 135, 140, 149 Mazzenga, A., 159
- McAllister, T., 97, 137, 139, 145, 150, 159, 161, 162, 167, 172, 175, 263,
- 285, 415 McBride, B.W., 105, 134, 135, 138, 139, 140, 141, 150, 153, 154, 165, 253, 309, 493, 503
- McCartney, D., 163, 431 McCaughey, W.P., 136, 143 McEwen, P.L., 147, 174 McGinn, S.M., 241, 409
- McGregor, E.M., 133 McKinnon, J.J., 137, 144, 401, 513,
- 521 McLaughlin, T., 163 McLean, K.L., 295 Megias, M.D., 273 Melka, M.G., 157 Menjivar, K., 85
- Menjivar, K., 85 Merkies, K., 177 Merrill, J., 53 Meschy, F., 534
- Metcalf, J.A., 531 Michalik, D., 47 Michaud, R. 279 Miglior, F., 128, 151
- Miller, S., 177 Miller, S.P., 126, 131, 133, 152, 153,
- 155, 158, 179 Mine, Y., 167 Mir, P.S., 172 Mirzaei, H.R., 166
- Mohammadabadi, T., 146 Montanholi, Y.R., 155 Montoya, C.A., 481
- Moore, S., 126 Moore, S.S., 126, 152, 159, 180 Moreira, J.A., 174
- Mu, Y.Y., 170 Muir, W.M., 182
- Mujibi, F.D.N., 152, 159, 180

- Mulder, I., 149 Munns, K., 161
- Mutsvangwa, T., 144, 159, 419
- Na, Z., 475 Narcy, A., 531
- Nasiri, M.R., 146 Nassiry, M.R., 164
- Nie, Z., 279, 168 Niven, S., 171
- Niven, S.J., 173 Nkrumah, D.J., 152
- Nkrumah, J.D., 128 Northwood, K.S., 150
- Novak, S., 163
- Nyachoti, C.M., **159**, **160**, **170**, **173**, 341, 353, 369
- Oba, M., 134, 141, 145
- Odongo, N.E., 105, 135, 140
- Ohama, A., 431 Ohh, S.J., 71
- Okine, E.K., 156, 178
- Olson, G.L., 219
- Oltjen, J.W., 533 Ominski, K., 141, 153
- Ominski, K., 141, 135, 175
- Or-Rashid, M.M., 134, 138, 139, 140
- Osborne, V.R., 105
- Osoro, K., 67, 146
- Oudah, E.Z.M., 166
- Pacan, J.C., 168
- Palucci, V., 129
- Pang, A., 162
- Pant, S.D., 154, 155, 157, 166
- Paranhos da Costa, M., 178
- Parsons, A. J., **532** Patience, J.F., **53**, 91
- ayne, M., 161
- Payne, R.L., 160
- Penner, G.B., 134, 141
- Petit, H.V., 139
- Piao, X.S., 71 Pietrasik, Z., 53
- Pietrasik, Z., 53 Pivotto, L.M., 151
- Pizzey, H., 154
- Plaizier, J.C., 134, 141, 153, 165, 180, 425
- Plastow, G., 126
- Pomar, C., 531
- Pouliot, E., 229 Pretheeban, T., 467
- Prithiviraj, K., 163
- Provenza, F., 182

Purdie, N.G., 148, 309 Purslow, P., 147, 156

Qingzhang, L., 475 Quinton, M., 152, 177 Quinton, V.M., 129

Racz, V.J., 521 Racz, V., 144 Radford, D., 140 Rafiei, A., 146 Rahmaninia, J., 166 Rajamahendran, R., 467 Rakhshandeh, A., 153, 172 Rasmussen, S., 532 Rathgeber, B.M., 156, 163, 179 Renema, R., 177 Reuter, T., 150 Reza-Lopez, S., 161 Rheaume, J., 175 Rideout, T.C., 536 Rigaux, L., 173 Ripoll, G., 37 Robertson, K., 163 Robertson, K.L., 156 Robine, L., 219 Robins, C.D., 136, 143 Robinson, J.A.B., 129, 130, 151, 156 Rodehutscord, M., 171 Rolland, D.C., 147, 315, 179 Roorbakhsh, R., 165 Roque, A.P., 138 Rosengren, L.B., 219 Ross, K.A., 53 Rossnagel, D.A., 521

Sabour, P., 168 Sainz, R.D., 533 Salim, H., 493 Salmerón, D., 273 Santschi, D.E., 383 Sanz. A., 37 Sargolzaei, M., 125, 126, 130, 131 Sariyel, V., 195 Sarson, A.J., 168 Sauvant, D., 531, 534 Schaefer, A., 177 Schaefer, A.L., 156, 178, 335 Schaeffer, L.R., 130, 132, 158 Schei, I., 97 Scheinin, M., 170 Schenkel, F., 154, 155, 164, 166 Schenkel, F.S., 125, 126, 130, 131, 155, 157 Schmidt, B., 149 Schmutz, S.M., 295

Schrooten, C., 125

Schwartzkopf-Genswein, K.S., 159, 175, 178, 179, 415 Scott, S.J., 136, 143, 162, 156 Sekhavati, M.H., 164 Seo, S., 537 Sewalem, A., 151 Schaefer, A.L., 175 Shand, P., 53 Sharif, S., 161 Sharma, B.S., 154, 155, 157, 166 Sharma, R., 161, 457 Sheane, W., 141 Shen, Y., 536 Sheppard, M.I., 1 Sheppard, S.C., 1, 21 Sherman, E.L., 152 Shoveller, A.K., 140, 160 Silasi, R., 178 Silversides, F.G., 156 Singh, R., 467 Sippel, M.A., 393 Skelding, A., 154 Slominski, B.A., 341, 353, 369 Smalec, E., 449 Smith, T.K., 169, 170, 181 Song, C., 149 Spratt, R.S., 393 Squire, J., 175 Squires, E.J., 148, 156, 157 Srinongkote, S., 170 Stachowicz, K., 131, 157 Stanford, K., 150, 161, 167, 285 Steele, M.A., 141, 153 Stephens, T.P., 167 Stewart, A.A., 135 Stokes, C., 149 Stookey, J.S., 175 Strathe, A. B., 535 Strothard, P., 126 Su, J., 361 Su, R., 457 Sullivan, B., 127 Sun, Z., 361

Szwaczkowski, T., 215

Tait, J., 21

Tamminga, E., 151, 176

Teixeira, A., 37

Tenuta, M., 135, 170, 175

Thallman, R.M., 123

Thériault, M., 229

Toosi, A., 124

Torkamanzehi, A., 131

Swanson, K.C., 152, 154, 155, 253,

493, 503, 536

Symeon, G.K., 331

Szeto, I.M.Y., 161

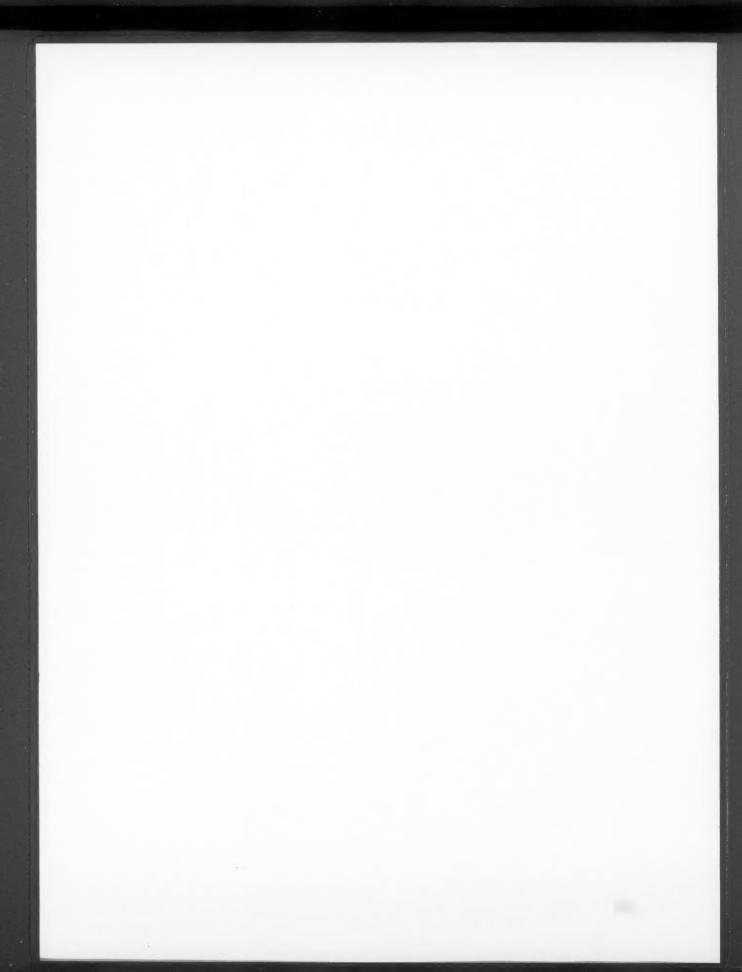
Torrey, S., 151, 176 Torzynski, G., 215 Tosh, J.J., 129, 132 Tremblay, G.F., 279 Tremorin, D., 135 Trippel, E.A., 129 Turner, P.V., 149

van Arendonk, J.A.M., 123 van der Linde, C., 125 van der Werf, J.H.J., 127 Van Doormaal, B.J., 128 van Veen, A.G., 165 van Vonderen, A.J., 138 Vander Voort, G., 126, 140, 175 Veira, D., 335 Veira, D.M., 179 Verschoor, C., 154, 155, 157, 164, 166 Vessie, G., 53 Villaneuva, B., 124 Vinther, J., 535 Vitti, D. M. S. S., 138, 174, 539 von Keyserlingk, M.A.G., 179

Waalderbos, K., 165 Waghorn, G.C., 241 Walker, A.M., 137, 401 Walsh, R.B., 162 Walters, S., 164 Walton, J.S., 162 Wang, C., 168 Wang, J., 441 Wang, M.H., 71 Wang, Y. J., 493, 503 Wang, Y., 97, 145, 170, 263, 415 Wang, Y.J., 154, 253 Wang, Z., 67, 126, 146, 180 Warren, L., 176 Watts, A., 181 Wawro, K., 47 Weber, L.P., 219 Wettstein, H.-R., 383 Widowski, T., 151, 156, 176, 177 Widyaratne, G.P., 91 Wilkinson, C., 177 Wilson, C.H., 135, 175 Wilton, J.W., 129, 131, 132, 152, 158 Witschi, A.-K.M., 383 Wittenberg, K.M., 135, 175 Wójcik, E., 449 Wolc, A., 215 Wood, B.J., 128, 201 Wood, K., 154 Wood, K.M., 152, 503 Woodward, B.W., 128 Woodward, J., 162

Wooliams, J.A., 124, 127 Woyengo, T.A., 159, 173 Wright, A.D.G., 150 Wright, T., 164 Wright, T.C., 140, 309 Wu, D., 149

Xiao, H., 361 Xu, W., 150 Xu, Y., 150 Xuejun, G., 475 Xuemei, N., 475 Yang, C., 167 Yang, S.X., 169 Yang, W.Z., 142, 145, 172 Yang, X., 169, 536 Yang, Y.X., 71 Yao, J., 441 Yi, J., 361 Yin, J., 457 Yitbarek, A., 170 Yoon, S.Y., 71 Yu, H., 168 Yu, P., 144 Zalinko, G.R., 521 Zeoula, L.M., 139 Zhang, M., 168 Zhang, W.-G., 457 Zhao, L., 168 Zhou, H., 168 Zhu, C.L., 171, 172, 173, 174, 175 Zhu, J., 168 Zhu, W.-Y., 168 Zijlstra, R.T., 85, 91, 489 Zintilas, C., 331



Subject Index

Canadian Journal of Animal Science, Volume 89, 2009

Acid, 171 Acid-base balance, 140 Acid rain monthly NH3 emissions from poultry in Canada, 21 Acidosis, 135, 140, 141, 153 Acute phase responses dietary additives and E. coli K88 responses, 353 Afshari sheep, 301 Aleutian mink disease virus, 130 Alfalfa, 136, 143 Alfatoxin, 181 Allometric growth body development in lambs, 37 Amino acid, 159, 160, 171 Amino acid composition, 172 Ammonia monthly NH3 emissions from poultry in Canada, 21 Androstenone, 148, 157 Animal model selection in Afshari sheep, 301 Antimicrobial peptide, 149 Antioxidant, 139 Aptamer, 155 Associative effects, 182 ATP synthase, 154

Bacitracin, 168 Backgrounding biodiesel mustard and canola presscake for growing cattle, 401 Bacteria, 134, 179 Bacteriophage biocontrol of Escherichia coli, 285 Barley, 142, 144, 145 essential oil compounds and rumen fermentation, 97 performance of steers fed a high energy oat, 521 Batch culture, 145 Beef, 133, 136, 143, 158 fatty acid composition, 67 fatty acid composition of Canadian beef, 315 dexamethasone and transportinduced weight loss in calves, 335 Beef cattle, 123, 152, 163, 178, 175, 179, 533 biodiesel mustard and canola presscake for growing cattle, 401 distillers' dried grains reduce methane loss from cattle, 409 feedlot cattle, 137, 154 greener cattle, 159 impact of Lactobacillus in growth of steers, 263 Beef fat tissue, 146 Beef heifer, 144, 159 Beef production, 159 Beef steer, 136, 143 Behaviour, 177, 182, 183 drinking behaviour, 141 eating behaviour, 415 feeding behaviour, 179, 180 on-farm handling, 156 ontogeny of belly nosing in pigs, 187 welfare, 176, 182 Belly nosing ontogeny of belly nosing in pigs, 187 Best management practices feed and manure nitrogen management: poultry, 1 Beta-adrenergic agonist ractopamine for finishing swine, 53 Biodiesel presscake biodiesel mustard and canola presscake for growing cattle, 401 Bioeconomic modelling, 538 Biofuel co-products, 137 Blood, 165 Blood urea nitrogen, 174 Boar, 176 Boar taint, 157 Body weight carcass composition of French lop rabbits, 47 Bone, 138, 174 Bone development, 181

Bovine genome, 537 Bovine respiratory disease, 178 Bowel inflammation, 167 Brain, 170 Branding, 178 Brassica warm-season and Brassica crops for grazing, 431 Breeding, 123, 182 breeding program, 125 breeding value, 124, 131 economic values for turkey production, 201 Breed-to-wean sow operations, 538 Broiler, 171, 170, 173 energy and lysine restriction in broilers, 71 enzyme facilitates growth of pathogen challenged chickens, 369 oregano essential oil in broilers' diets, 331 Broiler breeder, 169 Brown Swiss mathematical models of the lactation curve, 195 Buffalo, Iranian, 166 Bursa, 154 By-products, 159 Bayesian estimation for by-products degradability, 273 Caenorhabditis elegans, 168 Calcium, 137, 138, 531 Calf. 165

Caenorhabditis elegans, 168
Calcium, 137, 138, 531
Calf, 165
dexamethasone and transportinduced weight loss in calves, 335
Calving interval, 165
Canola
biodiesel mustard and canola
presscake for growing cattle, 401
Canola meal, 164
energy content of canola meals in
pigs, 481
Canola protein, 144
Carbon emissions, 159
Carcass
body development in lambs, 37
rearing environment and lamb
quality, 229

Page numbers in bold refer to abstracts

Bone morphogentic protein

hair follicles, 457

BMP2 bone morphogenetic

GnRH induced regulation of

estrogen receptors, 467

protein gene expression in goat

Carcass chilling, 156 Carcass composition ractopamine for finishing swine, 53 Carcass traits performance of steers fed a high energy oat, 521 Cartilage, 181 Cashmere goat BMP2 bone morphogenetic protein gene expression in goat hair follicles, 457 Castration, 133, 175, 178 genome size of the domestic goose, Cell nuclei genome size of the domestic goose, 449 Cellular energy metabolism carbohydrate source and visceral organ growth, 503 dietary CP level and visceral organ mass, 493 dry matter intake and visceral organ growth, 253 Cereal grain, 144 Charolais, 129 Chicken, 154, 156, 168 Cholestyramine, 157 Classification and discrimination, 144 Cleaning, 179 Climate change, 159 Clinical human isolates, 161 Cloprostenol parturition induction and health in pigs, 219 Clostridium perfringens, 168 enzyme facilitates growth of pathogen challenged chickens, 369 parturition induction and health in pigs, 219 Cod, Atlantic, 129 Co-products, 160 glycerol in weaned pig diets, 85 Coat colour associations of MC1R with beef cattle production, 295 Coccidia, 169

Coliforms bacteriophage biocontrol of Escherichia coli, 285 Collagen, 133 Colostrum, 165 linseed feeding in the transition period, 383 Competitive PCR, 164

Compost, 150

Condensed tannins reducing methane emissions and N excretion by cows, 241 Conjugated linoleic acid, 134, 147 fatty acid composition of Canadian beef, 315 Continuous recording, 140 Continuous-culture system essential oil compounds and rumen fermentation, 97 Core body temperature, 176 Corn essential oil compounds and rumen fermentation, 97 high-moisture corn, 173 performance of steers fed a high energy oat, 521 warm-season and Brassica crops for grazing, 431 Corn distillers' dried grains with solubles distillers' dried grains reduce methane loss from cattle, 409 Corn silage inclusion carbohydrate source and visceral organ growth, 503 Corn silage proportion, 154 Correlation, 146 fatty acid composition, 67 Corticosterone, 177

Cow, 124, 135, 140, 141, 150, 153, 161, 162, 176, 178 bovine genome, 537 bovine respiratory disease, 178 GnRH induced regulation of estrogen receptors, 467 Diet. 147 lactating, 132 mathematical models of the cows, 393 lactation curve, 195 Diet selection, 179

Cow, beef, 123, 152, 163, 178, 175, 179, 533 biodiesel mustard and canola presscake for growing cattle, 401 cull cow beef, 151

cows, 393

rumen-protected CLA for dairy

distillers' dried grains reduce methane loss from cattle, 409 impact of Lactobacillus in growth of steers, 263

performance of steers fed a high energy oat, 521

Cow, dairy, 125, 131, 135, 136, 139, 140, 142, 150, 165, 166, 180 dairy rations, 138 linseed feeding in the transition period, 383

cows, 111 reducing methane emissions and N excretion by cows, 241 rumen-protected CLA for dairy cows, 393 selenium uptake by ruminal microorganisms, 105 time of feed delivery in dairy cows, 425 Cowpea, 171 CpG oligonucleotides, 161 Crab meal, 173 Crop residues, 152 Crossbred, 158 Cryogenic preservation fibroblast cell line of Songliao Black pig, 463 CYB17A1, 148 CYB5, 148

organic selenium yeast for dairy

Cytokines, 155 Dark cutters, 176 Data analysis, 179 Decision aid program, 533 Degradation curve Bayesian estimation for by-products degradability, 273 Dehorning, 178 Deoxynivalenol, 181 Deterministic prediction, 124 Dexamethasone dexamethasone and transportinduced weight loss in calves, 335 **DGGE, 168** rumen-protected CLA for dairy

Digestibility, 137, 171 glycerol in weaned pig diets, 85 wheat DDGS and xylanase in swine diets, 91 zero-tannin faba bean in pig starter diets, 489 Digestible energy energy content of canola meals in pigs, 481 Digestive function, 167 Direct-fed microbial impact of Lactobacillus in growth

dietary CP level and visceral organ

of steers, 263 Direct-maternal, 133 Disease, 182

Dietary crude protein

mass, 493

Distillers' grain, 137, 174 wheat DDGS and xylanase in swine diets, 91

DNA mass

genome size of the domestic goose, 449

Docosahexaenoic acid, 138, 139

Domestic goose

genome size of the domestic goose, 449

Drinking behaviour, 141

Dry matter disappearance, 141, 145 Dry matter intake

dry matter intake and visceral organ growth, 253

Eating behaviour whole oat in feedlot diets, 415

Economics, 129
Economic model

economic values for turkey production, 201

Economic value

economic values for turkey production, 201

Ecosystem, 182

Egg albumin, 177
Egg yolk antibodies

dietary additives and E. coli K88 responses, 353

dietary additives and piglet gut ecology, 341

Emissions

feed and manure nitrogen management: poultry, 1 Empirical modelling, 534

Endocrine status, 160

Endometrium

GnRH induced regulation of estrogen receptors, 467

Endothelin-1

protective effect of soluble fibre, 361

Endothelium

protective effect of soluble fibre, 361

Energy, 181

energy content of canola meals in pigs, 481

reducing methane emissions and N excretion by cows, 241

wheat DDGS and xylanase in swine diets, 91

Energy efficiency, 136 Enrichment, 138, 139

Enteritis, necrotic, 168

Enterohepatic circulation, 157

Environment, 175

bacteriophage biocontrol of Escherichia coli, 285 greener cattle, 159

Enzyme

enzyme facilitates growth of pathogen challenged chickens, 369

Equine, 181

Escherichia coli, 161, 167

bacteriophage biocontrol of Escherichia coli, 285

biocontrol of *Escherichia coli*, 285 dietary additives and *E. coli* K88

responses, 353 dietary additives and piglet gut ecology, 341

enterotoxigenic E. coli, 341

Essential oil compound essential oil compounds and

rumen fermentation, 97 Estrogen receptors

GnRH induced regulation of estrogen receptors, 467

Evolution, 124, 161

Ewe reproduction, 132

Expression

BMP2 bone morphogenetic protein gene expression in goat hair follicles, 457

expression of glucose transporter in dairy goats, 475

Faba bean

zero-tannin faba bean in pig starter diets, 489

Faeces, 167

False positive, 148

Fat depots

body development in lambs, 37 Fat tissue

fatty acid composition, 67

Fatty acid, 139

fatty acid composition, 67, 146 linseed feeding in the transition period, 383

long chain polyunsaturated, 163 omega-3 fatty acids, 383

volatile, 142

Feed efficiency, 132, 145, 152, 155, 156, 163

Feed intake, automated measurement of, 179

Feed intake, residual, 152, 156, 158, 179

Feed, liquid, 173

Feed temperature, 172

Feeding

behaviour, 179, 180

effect of wheat-based DDGS on rumen fermentation, 513 winter feeding, 152

Feeding time

time of feed delivery in dairy cows, 425

Feedlot, 137, 145

whole oat in feedlot diets, 415

Feedlot cattle, 137, 154

Fermentation, in vitro

Bayesian estimation for

by-products degradability, 273

Fertiliser, 136, 143

Feulgen reaction

genome size of the domestic goose,

Fibre, soluble

protective effect of soluble fibre, 361

Fibroblast cell line

fibroblast cell line of Songliao Black pig, 463

Field experience, 180 Filtering methods, 179

Flax, 139

Flaxseed

enzyme facilitates growth of pathogen challenged chickens, 369

Foal, 177

Fodder crops

warm-season and *Brassica* crops for grazing, 431

Follicle, 169

Food efficiency, 128

Forage, 133

whole oat in feedlot diets, 415

Forage quality, 136, 143

Formaldehyde, 146

Fourier amplitude sensitivity test, 537

Fractional protein degradation rates, 536

Fractional protein synthesis rates, 536

Fungi and protozoa, 146 Fusarium, 181

Fusarium micotoxin, 169, 170

Gas production, 145, 146

Gastrointestinal ecology

dietary additives and piglet gut

ecology, 341 Gender, 147, 174

Gene expression, 127, 148, 153, 163,

MRNA expression of very lowdensity lipoprotein receptor, 441 Generation interval selection in Afshari sheep, 301 Genetic contribution, long-term, 127 Genetic correlation, 129 Genetic diversity, 157 Genetic evaluation, 132 Genetic marker, 125, 128 Genetic risk to disease, 124 Genetic trend selection in Afshari sheep, 301 Genetics, 132, 151 Genome size genome size of the domestic goose, 449 whole genome association, 126, Genome-wide selection, 124, 131 Genomic selection, 123, 124, 125, 126, 131 Genotype probabilities, 126 Gestation, 161 Global sensitivity, 537 Glucose tolerance, 172 Glucose transporter expression of glucose transporter in dairy goats, 475 Glucosensing, 161 Glycerol glycerol in weaned pig diets, 85 Glycogen parturition induction and health in pigs, 219

hair follicles, 457
expression of glucose transporter
in dairy goats, 475
Gonadotropin releasing hormone
GnRH induced regulation of
estrogen receptors, 467
Goose, domestic
genome size of the domestic
goose, 449
MRNA expression of very low-

BMP2 bone morphogenetic

protein gene expression in goat

Goat

Grasslands, 175
Grazing management, 182
Greenhouse gas emissions, 135, 533
170
distillers' dried grains reduce

density lipoprotein receptor, 441

distillers' dried grains reduce methane loss from cattle, 409 Group-housing systems, 538 Growth, 129, 170, 173
body development in lambs, 37
rearing environment and lamb
quality, 229
Growth functions, 539
Growth model, 533
Growth performance, 171, 172, 174
impact of Lactobacillus in growth
of steers, 263
oregano essential oil in broilers'
diets, 331
zero-tannin faba bean in pig

Growth rate, 128, 133, 147
Gut development, 171
Gut function, 149
Gut microbiota, 149
Hair follicle

starter diets, 489

BMP2 bone morphogenetic
protein gene expression in goat
hair follicles, 457
Haplotype blocks, 130
Health, 151, 165
Heat-soluble collagen, 147
Heifer, 169
Hen, 177
Heritability, 129, 130
reproductive traits in warmblood
horses, 215
selection in Afshari sheep, 301
Hexokinase I, 164
High performance liquid
chromatography, 147

chromatography, 147

Hog manure, 175

Holstein cattle, 125, 126

Hormone, 169

Horse, 180, 181

reproductive traits in warmblood horses, 215

Hot boning, 151

Housing, 183

Hybridization, in situ

BMP2 bone morphogenetic protein gene expression in goat hair follicles, 457

Hydrolysis products

Hydrolysis products dietary additives and *E. coli* K88 responses, 353
5-hydroxyindolacetic acid, 170 17α-hydroxylase, 148
Hypothalamus, 161

Immune response, 142, 158 Immune stimulation, 161 Immune system stimulation, 153, 172 Immunoglobulin organic selenium yeast for dairy cows, 111 Inbreeding, 127, 128, 131, 157 Inbreeding depression, 128 Income, net, 143 Infection resistance, 149 Inflammation, 155 Infrared thermography, 154, 155, 156, 178 Innervation, 176 Insemination, 162 Insulin, 160 Interbeef, 129 Interleukin-12RB2, 154 International genetic evaluation, 129 Intestine, 162 intestinal alkaline phosphatase, 167 intestinal epithelia, 536 intestinal morphology, 169 Iran Iranian buffalo, 166 Isoleucine, 174 Isotope, stable, 536 iTRAQ, 148, 164

Johne's disease, 154, 155, 157, 166

Kurdi sheep breed, 133

Lactation, 132, 148
lactation function, 166
lactation persistency, 165
mathematical models of the
lactation curve, 195
proteolysis in transition dairy
cows, 309
Lactic acid, 135, 142
Lactobacillus casei, 168
impact of Lactobacillus in growth
of steers, 263
Lactobacillus lactis
impact of Lactobacillus in growth
of steers, 263

impact of Lactobacillus in growth of steers, 263
Lamb, 139, 145
body development in, 37
growth, 132
number of lambs weaned, 133
rearing environment and lamb quality, 229
Leptin
energy and lysine restriction in broilers, 71

Lignin performance of steers fed a high energy oat, 521 Limit feeding, 147 Limousin, 129 Lineage characterization, 161 Linkage disequilibrium, 125, 126 Linoleic acid, 134 Linseed linseed feeding in the transition period, 383 linseed oil, 139 Lipid distillers' dried grains reduce methane loss from cattle, 409 lipid sensing, 161 Lipopolysaccharide, 153 Lipoprotein receptor, very low-density MRNA expression of very low-density lipoprotein receptor, 441 Liver, 149, 164 proteolysis in transition dairy cows, 309 Livestock populations, 130 Longevity, 128, 165 Lowest score regions, 131 Luteinizing hormone, 169 17,20 Lyase, 148 Lysine, 160 energy and lysine restriction in broilers, 71 Machine learning, 123 Mammary gland, 164 in dairy goats, 475 Manure

expression of glucose transporter feed and manure nitrogen management: poultry, 1 hog manure, 175 manure management, 533 Marker-assisted selection, 124 Mastitis, 154, 155, 157 Mathematical model mathematical models of the lactation curve, 195 Meadow bromegrass, 136, 143 Meat quality, 156 breast meat quality, 156 meat tenderness, 147 oregano essential oil in broilers' diets, 331 rearing environment and lamb quality, 229

Mechanistic model, 532, 533, 534 Medicago sativa NIRS prediction of forage carbohydrates, 279 Melanocortin 1 receptor associations of MCIR with beef cattle production, 295 Melanocortin 4 receptor; associations of MC1R with beef cattle production, 295 α-Melanocyte stimulating hormone associations of MC1R with beef cattle production, 295 Metabolic acidosis, 135, 140 Metabolic reconstruction, 537 Metabolizable energy energy and lysine restriction in broilers, 71 Methane, 532 distillers' dried grains reduce methane loss from cattle, 409 reducing methane emissions and N excretion by cows, 241 Methanogen, 150 Microarray, 127, 148, 149, 153 Microsatellite markers, 131 Milk, 139, 163 composition, 139, 142 fat, 139 linseed feeding in the transition period, 383 reducing methane emissions and N excretion by cows, 241 rumen-protected CLA for dairy cows, 393 time of feed delivery in dairy cows, 425 traits, 166

urea content, 166 yield: mathematical models of the lactation curve, 195 Millet warm-season and Brassica crops for grazing, 431 Mink, 130 Mitochondrial DNA, 150 Mixer calibration, 138 Model, 138, 531 bioeconomic modelling, 538 economic values for turkey production, 201 empirical modelling, 534 growth model, 533 mathematical models of the

lactation curve, 195

mechanistic model, 533

multi-criteria models, 535 pig growth models, 175 quantitative models, 123 selection in Afshari sheep, 301 threshold model, 133 Moisture enhancement, 151 Molecular breeding values, 128 Molecular cloning MRNA expression of very lowdensity lipoprotein receptor, 441 Molecular spectra, 144 Monensin, 139, 150 Morphology, 141 Mortality, 182 Mortality disposal, 150 Multi-criteria models, 535 Multiple traits, 132 Multivitamin supplementation, 161 Muscle (skeletal) proteolysis in transition dairy cows, 309 Mustard biodiesel mustard and canola presscake for growing cattle, 401 Mycobacterium avium paratuberculosis, 157 Mycotoxin, 181 Myostatin energy and lysine restriction in broilers, 71

Na +/K +-ATPase, 154 Near infrared reflectance spectroscopy NIRS prediction of forage carbohydrates, 279 Necrotic enteritis, 168 Nitric oxide protective effect of soluble fibre, 361 Nitrogen, 532 microbial N, 144 monthly NH3 emissions from poultry in Canada, 21 nitrogen balance, 136 nitrogen efficiency, 169 nitrogen or sulphur balance, 153 reducing methane emissions and N excretion by cows, 241 retention, 159 Nonparametric methods, 123 Nutrient availability, 144 intake, 170 nutritive value, 173

removal efficiencies, 175 requirements, 535

Oat

hulless oats, 173 performance of steers fed a high energy oat, 521 whole oat in feedlot diets, 415

Odour

feed and manure nitrogen management: poultry, 1

Omega-3 fatty acids

linseed feeding in the transition period, 383

Omics, 149 Ontogeny

ontogeny of belly nosing in pigs,

Oregano

oregano essential oil in broilers' diets, 331

Oscillating dietary CP, 159

Osteopontin, 154 Overfeeding

MRNA expression of very lowdensity lipoprotein receptor, 441

Pain medication, 175 Pain mitigation, 178

Parent-stock selection, 128

Parity, 165

Parturition-induction

parturition induction and health in pigs, 219

Pasture, 136, 143

Peptidoglycan recognition protein.

Performance, 152, 159, 179 performance testing, 177

pH, 140, 534

post-mortem pH decline, 156

Phleum pratense

NIRS prediction of forage carbohydrates, 279

Phospholipids, 170 Phosphorus, 174, 531

P balance, 539

Phytase, 170, 171, 174, 531

Phytic acid, 159

Pig, 125, 126, 129, 147, 153, 156, 160, 167, 172, 173, 174, 183, 531

energy content of canola meals in pigs, 481

fibroblast cell line of Songliao Black pig, 463 glycerol in weaned pig diets, 85

newly weaned pigs, 171

ontogeny of belly nosing in pigs, 187

parturition induction and health in pigs, 219

pig growth models, 175 post-weaned pigs, 539

ractopamine for finishing swine, 53

sow, 160, 163 starter pig, 174

weanling pigs, 160, 167, 536

wheat DDGS and xylanase in swine diets, 91

zero-tannin faba bean in pig starter diets, 489

Piglet, 159, 172

dietary additives and piglet gut ecology, 341

Piglet diarrhoea

dietary additives and E. coli K88 responses, 353

Plasma, 138, 139

Plasma amino acid, 140

Plasma metabolite, 135, 142

Plasma NEFA, 140

Pleiotropy, 152

PM_{2.5}

monthly NH3 emissions from poultry in Canada, 21

Polymorphism, 154 Polysaccharide, nonstarch

dietary additives and E. coli K88 responses, 353

dietary additives and piglet gut ecology, 341

Pork quality, 151

ractopamine for finishing swine, 53

Potassium, 160

Poultry, 163

Poultry house, 179

Power, 130

Prepulse inhibition, 131

Primary explants technique

fibroblast cell line of Songliao Black pig, 463

Probiotics, 168

Processed lignin, 145

Processing, 145

Production function, 538

Productive life, 165

Profit, 175

Progesterone, 162

GnRH induced regulation of estrogen receptors, 467

Progesterone-releasing intravaginal device, 162

Programming, linear, 535

Prolactin, 160

Prolactin receptor, 154

Propionic acid, 173

Propylene glycol

propylene glycol in peripartum cows, 419

Prostaglandin F2α

parturition induction and health in pigs, 219

Protein, 537

oscillating dietary CP, 159

protein level, 147

protein production, microbial, 419 propylene glycol in peripartum cows, 419

protein synthesis, 159, 169

protein turnover, 537

Proteolytic pathway, 135

Protozoa, 134, 167, 535

Pulp, 176

Purebred, 158

Quality control, 127

Quantitative models, 123

Quantitative PCR, 168

Quantitative trait locus, 125

QTL fixation, 127

QTL mapping, 130, 131

Rabbit

carcass composition of French lop rabbits, 47

protective effect of soluble fibre, 361

Ractopamine

ractopamine for finishing swine, 53

Rain, acid

monthly NH₃ emissions from poultry in Canada, 21

Rare earth elements, 172

Rat, 172

Real-time PCR, 134, 150

BMP2 bone morphogenetic protein gene expression in goat hair follicles, 457

Rearing environment

rearing environment and lamb quality, 229

Recombinant congenic lines, 131

Recombination, 125

Red clover silage, 136 Reliability, 125

Repeated measures, 128

Reproduction

reproductive traits in warmblood horses, 215

Reproduction, 132, 163

Reproductive problems, 180 Residual feed intake, 152, 156, 158, Residual feed efficiency, 132 Reticulo-rumen, 535 Rodent, 537 Rumen, 134, 150 impact of Lactobacillus in growth of steers, 263 rumen anaerobic fungal, 164 rumen condition, 159 rumen degradation kinetics, 144 rumen digestion, 145 rumen epithelium, 141, 153 rumen fermentation, 513 rumen metabolism, 145 ruminal acidosis, 134 ruminal fluid, 167 ruminal pH, 134, 141, 142

Salivary cortisol dexamethasone and transportinduced weight loss in calves, 335 Salivary dexamethasone dexamethasone and transportinduced weight loss in calves, 335 Salmonella, 168 SDS-PAGE, 163 Selection, 129, 132, 157 selection index, 152 selection programs, 177 selection response, 131 Selenium, 149 organic selenium yeast for dairy cows, 111 selenium uptake by ruminal microorganisms, 105

organic selenium yeast for dairy

cows, 111
Senescence, 149
Sensitivity, local, 537
Sequestration, 535
Serotonin, 170
Sex selection, 155
Shear force, 151
Sheep, 135, 138, 140
bacteriophage biocontrol of

Selenized yeast

Escherichia coli, 285
body development in lambs, 37
Kurdi sheep breed, 133
selection in Afshari sheep, 301
Shipping weight

associations of MC1R with beef cattle production, 295 Silage red clover silage, 136

Single marker regression, 126
Single nucleotide polymorphism,
127, 152, 155, 157, 166
Skin temperature, 155

Slaughter quality carcass composition of French lop rabbits, 47 Social effects, 125

Social interactions, 123 Sodium hydroxide, 146 Soft tissue, 138, 174 Software, 130

Somatic cell count, 166 Songliao Black pig fibroblast cell line of Songliao

Black pig, 463
Sorghum
warm-season and *Brassica* crops

for grazing, 431
Sorting
time of feed delivery in dairy

cows, 425 Sow, **160**, **163**

Soybean meal zero-tannin faba bean in pig starter diets, 489

Sperm, 155 Splenocytes, 172

Steer
carbohydrate source and visceral
organ growth, 503

dietary CP level and visceral organ mass, 493 dry matter intake and visceral

organ growth, 253 Stress, 177, 182 Stx2, 162

Sub-acute ruminal acidosis, 134, 141, 153, 180, 534

effect of wheat-based DDGS on rumen fermentation, 513

Sucrose, 134 Sudan grass

warm-season and *Brassica* crops for grazing, 431

Sugar NIRS prediction of forage carbohydrates, 279 Sugar grass, 532

Sulphur amino acids, 153, 172

Sulphur hexafluoride distillers' dried grains reduce methane loss from cattle, 409 Sunflower meal, 146 Surfactants, 145 Survey, 147, 178

fatty acid composition of Canadian beef, 315 method to wean foals, 177 Survival, 151

Sus scrofa, 164 Sustainability, 123 Swine, 151, 170, 176

ractopamine for finishing swine, 53

Synchronization, 169 Synchrotron, 144 Systems biology, 148, 537 Systems research, 135

Taste panel, 151 Temperament, 156 Temperature

rearing environment and lamb quality, 229 Tenderness, 133

Thermography, infrared, 154, 155, 156, 178

Threshold model, 133
Thyroid hormone
organic selenium yeast for dairy

cows, 111
Time of feeding
time of feed delivery in dairy

cows, 425 Tissue

body development in lambs, 37

TLR4, 166 Toasting

energy content of canola meals in pigs, 481 Toll-like receptors, 168

Total collagen, 147
Total mixed rations, 138
Trans fatty acids, 147
fatty acid composition

fatty acid composition of Canadian beef, 315

Transgenic animal, 149
Transition dairy cow

propylene glycol in peripartum cows, 419

Transition period, 140 linseed feeding in the transition

linseed feeding in the period, 383

Translation, in vitro, 164 Transport, 151, 176

dexamethasone and transportinduced weight loss in calves, 335

Transport practices, 178
Transportation, 176
Turkey, 128, 170
economic values for turkey
production, 201

Tusk, 176

Ubiquitin-mediated proteolytic pathway, 140 proteolysis in transition dairy cows, 309 Undaria pinnatifida protective effect of soluble fibre,

Uterine fluid, 163

Vaccenic acid

fatty acid composition of Canadian beef, 315

Variance component estimation, 123 Virus, Aleutian mink disease, 130 Visceral organ mass

carbohydrate source and visceral organ growth, 503

dietary CP level and visceral organ mass, 493

dry matter intake and visceral organ growth, 253

Vitamin

multivitamin supplementation, 161 Volatile fatty acid 142

Weaning, 133, 177 glycerol in weaned pig diets, 85 weanling pigs, 160, 167, 536 Weight loss dexamethasone and transportinduced weight loss in calves, 335

Welfare, 176, 182 Well-being, 178 Wheat, 137

Wheat dried distillers' grains with solubles, 141 effect of wheat-based DDGS on

rumen fermentation, 513

Whey permeate, 173

Whole genome association, 126, 130 Winter feeding, 152

Wood's gamma function, 166

Xylanase

wheat DDGS and xylanase in swine diets, 91

Yolk, 177

